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Data Science Intern @ LGM Virtual Intrnship 2021 (October)

Beginner Level Task

Task 4: Image to Pencil Sketch with Python

In [ ]:
```
```

Import Libraries

In [2]:
```
!pip install opencv-python
```

```
Requirement already satisfied: opencv-python in c:\users\admin\appdata\local\programs\python\python39\lib\site-packages (4.5.3.56)
Requirement already satisfied: numpy>=1.19.3 in c:\users\admin\appdata\local\programs\python\python39\lib\site-packages (from opencv-python) (1.19.5)
```

In [3]:
```
import cv2
import matplotlib.pyplot as plt
```

Original Image

In [4]:
```
image=cv2.imread("C:\\Users\\Admin\\Desktop\\Mahadeva.jpg")
```

In [5]:
```
plt.figure(figsize=(8,8))
plt.imshow(image)
```

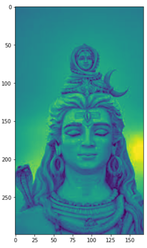
Out[5]:
```
<matplotlib.image.AxesImage at 0x297f5a54c10>
```

Gray Image

In [6]:
```
gray_image=cv2.cvtColor(image,cv2.COLOR_BGR2GRAY)
```

In [7]:
```
plt.figure(figsize=(8,8))
plt.imshow(gray_image)
```

Out[7]:
```
<matplotlib.image.AxesImage at 0x297f5aea0d0>
```

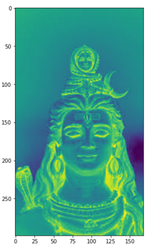


Inverted Gray Image

In [8]:
```
inverted_gray_image=255-gray_image
```

In [9]:
```
plt.figure(figsize=(8,8))
plt.imshow(inverted_gray_image)
```

Out[9]:
```
<matplotlib.image.AxesImage at 0x297f5b55700>
```

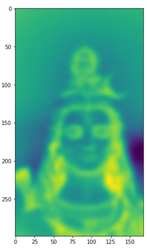


Blurred Image

In [10]:
```
blurred_image=cv2.GaussianBlur(inverted_gray_image,(21,21),0)
```

In [11]:
```
plt.figure(figsize=(8,8))
plt.imshow(blurred_image)
```

Out[11]:
```
<matplotlib.image.AxesImage at 0x297f5bbf9d0>
```

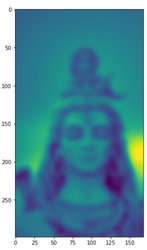


Inverted Blurred Image

In [12]:
```
inverted_blurred_image=255-blurred_image
```

In [13]:
```
plt.figure(figsize=(8,8))
plt.imshow(inverted_blurred_image)
```

Out[13]:
```
<matplotlib.image.AxesImage at 0x297f5e07be0>
```

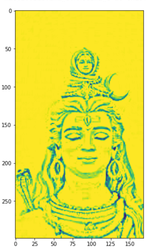


Pencil Sketch Image

In [14]:
```
pencil_sketch_image=cv2.divide(gray_image,inverted_blurred_image,scale=256.0)
```

In [15]:
```
plt.figure(figsize=(8,8))
plt.imshow(pencil_sketch_image)
```

Out[15]:
```
<matplotlib.image.AxesImage at 0x297f5ce0d00>
```



In [ ]:
```
cv2.imshow("Original Image",image)
cv2.imshow("New Image",pencil_sketch_image)
cv2.waitKey(0)
```

In [ ]:
```
```